

Aa 19. Apparatus to test for the presence of leaks in the evaporative system of a motor vehicle, said apparatus comprising:

a source of gas under pressure connected to the evaporative system under test by way of a gas supply line interconnected therebetween so as to pressurize the evaporative system under test; and

a gas flow meter located in the gas supply line between said source of gas under pressure and the evaporative system under test, said gas flow meter providing a reading that is indicative of a leak within the evaporative system under test, the magnitude of said reading determining whether the leak is in need of repair.

20. The apparatus recited in Claim 19, wherein said gas flow meter is a non-regulating flow meter having a moving ball indicator, the movement of said ball indicator providing a visual reading of the flow of gas under pressure to the evaporative system under test and an indication of whether the evaporative system under test has a leak that is in need of repair.

21. The apparatus recited in Claim 19, wherein said source of gas under pressure is a source of nitrogen gas.

22. The apparatus recited in Claim 19, further comprising a unidirectional check valve located in the gas supply line between said gas flow meter and the evaporative system under test to prevent the flow of gas in a direction away from the evaporative system under test and towards said gas flow meter.

23. The apparatus recited in Claim 19, further comprising a gas accumulator located in the gas supply line between said source of gas under pressure and said gas flow meter, said gas accumulator having a chamber within which to dampen fluctuations and pulsations in the flow of gas under pressure from said source thereof to said gas flow meter.

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24. The apparatus recited in Claim 23, further comprising a check valve coupled to said gas accumulator by which to relieve excessive pressure in the gas supply line between said source of gas under pressure and the evaporative system under test.

25. The apparatus recited in claim 19, further comprising a multi-position selector valve located in the gas supply line between said source of gas under pressure and said gas flow meter, said multi-position selector valve being moved to a first position at which to connect said source of gas under pressure to said gas flow meter, and said multi-position selector valve being moved to a second position at which to disconnect said source of gas under pressure from said gas flow meter.

26. The apparatus recited in claim 19, wherein said evaporative system of a motor vehicle under test is the fuel vapor recovery system.

27. A method for testing for the presence of leaks in the evaporative system of a motor vehicle, said method comprising the steps of:

supplying a gas under pressure to the evaporative system under test by way of a gas supply line connected therebetween so as to pressurize the evaporative system under test;

locating a gas flow meter in the gas supply line between said source of gas under pressure and the evaporative system under test and monitoring the flow of gas therebetween, said gas flow meter providing a reading that is indicative of a leak within the evaporative system under test; and

comparing the magnitude of said reading with a pre-determined magnitude that is determined when the evaporative system under test has an acceptable leak for deciding whether the indicated leak is in need of repair.